

Monday September 22 weather briefing for ARISE, Fairbanks Alaska mission region

\*\* target area of the day: satellite underpass tracks in the area of 70-77N and 135-155W \*\*

Current synoptic overview and short range forecast for the next flight day, Tuesday Sept. 23:

As the remains of a cyclone frontal system to the south move east into Canada, a polar low is moving to the north and east through western Alaska. The upper level low associated with the frontal system continues moving eastward across the state with the help of an increasingly strong upper level jet stream. By Tuesday afternoon this frontal system will be stretching across most of the state with the southern edge of the cold front passing through the Bering Sea and Nunivak Island and the northern edge of the frontal system wrapping around the low north of Barrow. The clouds and associated precipitation will be accompanied by increasing winds generally from the west.

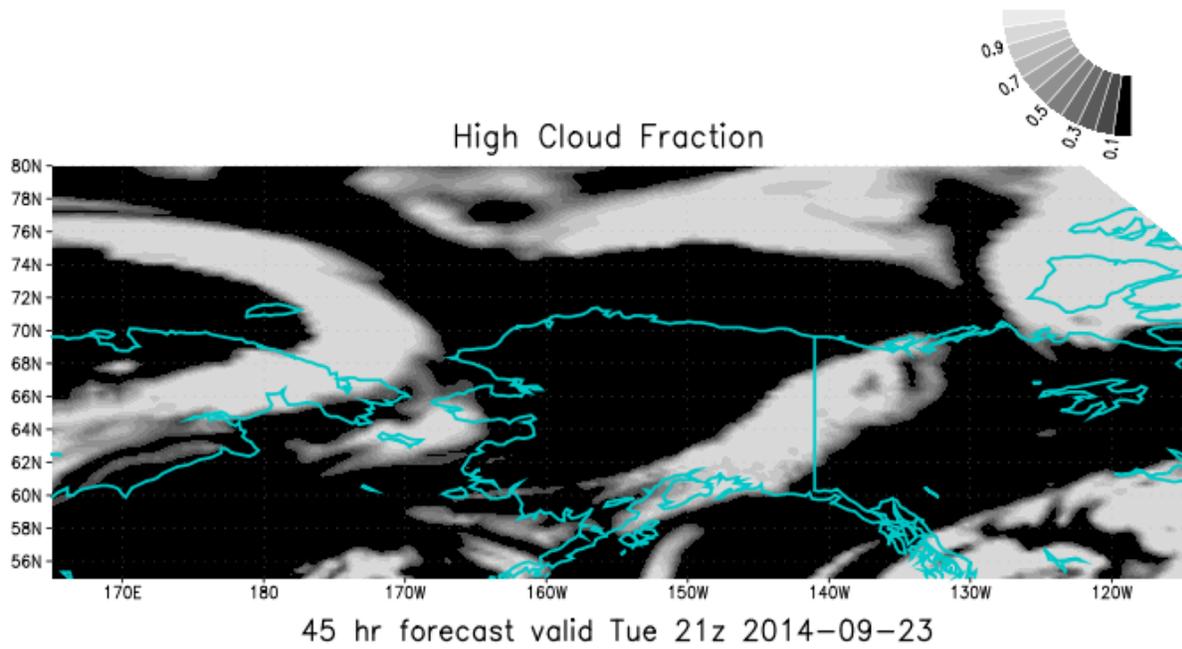
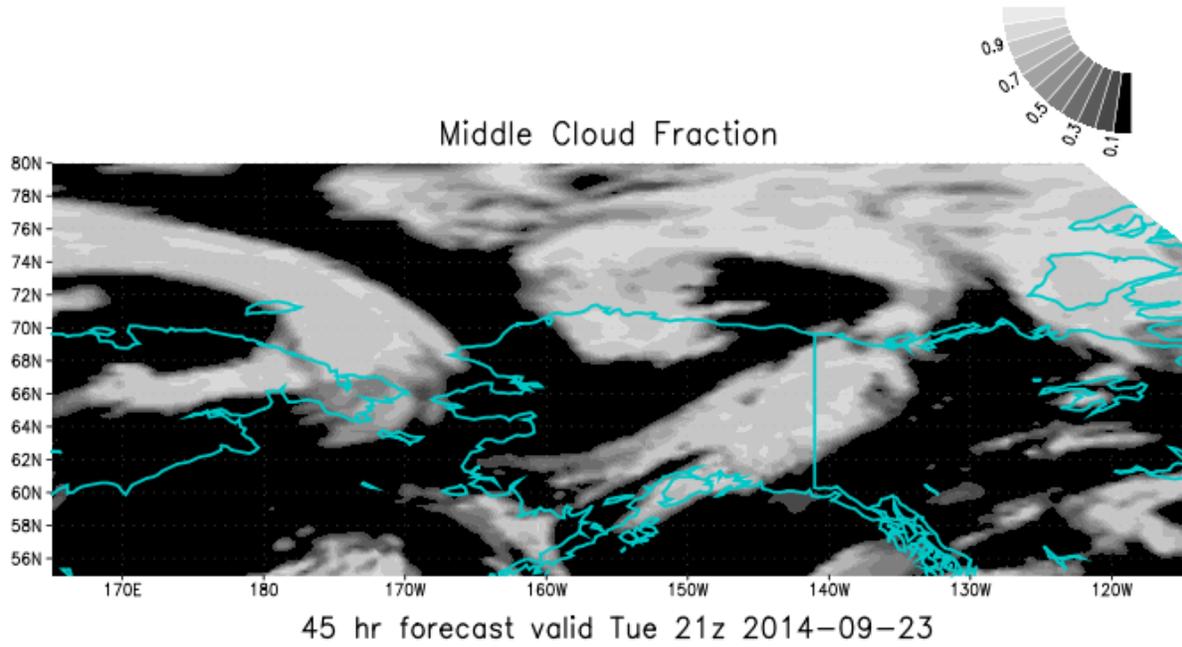
One area of particular interest may be the region in the Barrow Sea where cold dry air behind the front has produced an area that is forecast to be free of mid to high level clouds.

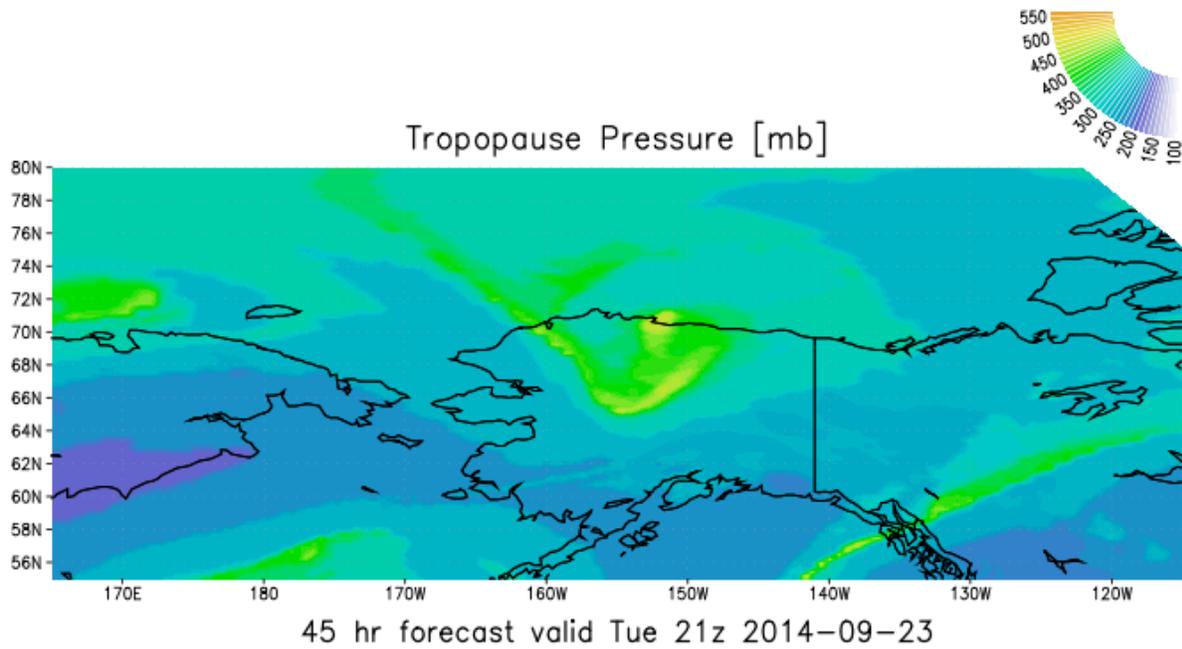
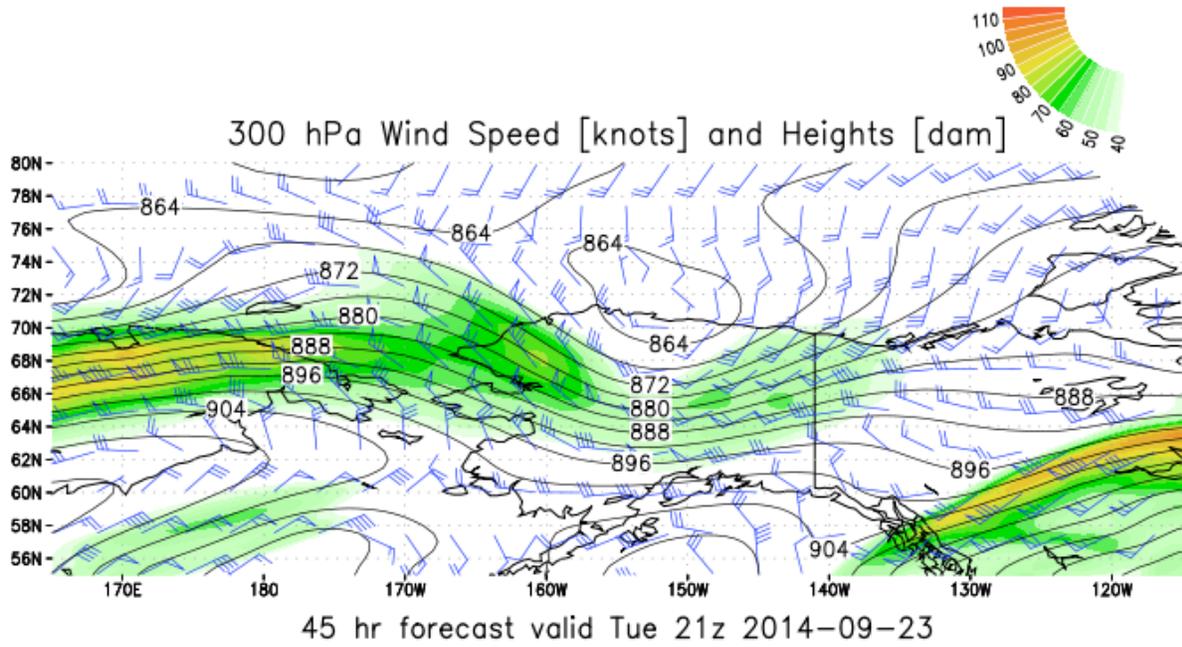
Also worth mentioning is a region of low tropopause heights that moves quickly through the region. It is possible depending on the flight timing that perhaps on the return trip, the flight may encounter this area of low tropopause heights.

Outlook for succeeding flight day, Wednesday Sept. 24:

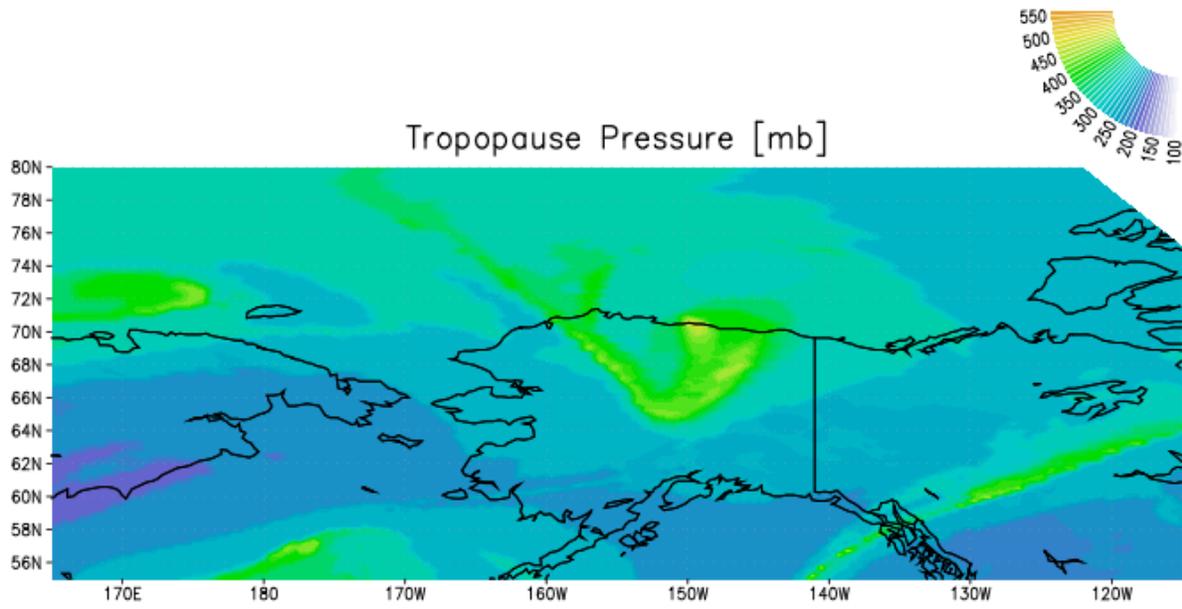
The mid-level jet stream energy now in central Alaska will propagate another trough/frontal system quickly through interior Alaska as several short wave features make their way across the state. This weaker fast moving system has scattered high clouds but mostly overcast mid level clouds in the area of interest.

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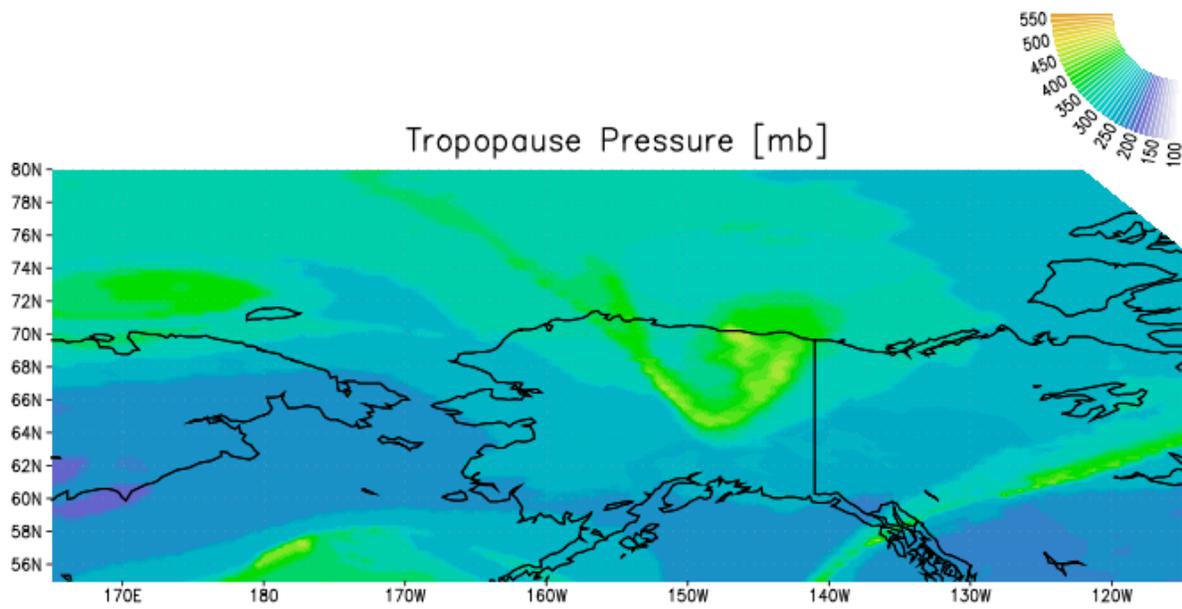


NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2014-09-22



48 hr forecast valid Wed 00z 2014-09-24

NASA/GMAO - GEOS-5 Forecast Initialized on 00z 2014-09-22



51 hr forecast valid Wed 03z 2014-09-24